

**IN THE CLAIMS**

The following claim listing replaces all prior claim listings:

1-13. (Cancelled)

14. (Currently Amended) A pressure controller for use with a pump through which a fluid can pass and which can be driven at a selected speed by a pump drive mechanism, said pressure controller comprising:

a microprocessor having a control logic program configured to receive at least two electrical signals correlated to at least two pressure values, said electrical signals being generated by at least one pressure transducer configured to transduce the pressure values of the fluid entering ~~or and~~ exiting said pump;

wherein,

said microprocessor produces an output electrical signal used by said pump drive mechanism to drive said pump at said selected speed based on said control logic program and at least one of said electrical signals.

15. (Currently Amended) ~~The~~ A pressure controller of claim 14 for use with a pump through which a fluid can pass and which can be driven at a selected speed by a pump drive mechanism, said pressure controller comprising,

a microprocessor having a control logic program configured to receive at least two electrical signals correlated to at least two pressure values, said electrical signals being generated

by at least one pressure transducer configured to transduce the pressure values of the fluid entering and exiting said pump;

wherein,

said microprocessor produces an output electrical signal used by said pump drive mechanism to drive said pump at said selected speed based on said control logic program, and

\_\_\_\_\_ wherein said microprocessor uses at least one of a first drive mechanism speed effective to control the pressure entering the pump, and a second drive mechanism speed effective to control the pressure exiting the pump to determine a pump drive mechanism speed that would theoretically maintain at least one of said pressure entering said pump and said pressure exiting said pump at about the value at which said pressures entering and exiting said pump were measured via said electrical signals ~~correlated to an actual pressure value of said fluid.~~

16. (Previously Presented) A pressure controller of claim 15, wherein said microprocessor computes the specific weight of the fluid being pumped from measured values of the pressures entering and exiting the pump during pumping, and uses the computed specific weight to select the first and second known drive mechanism speeds.